

1-1

Skills Practice

Points, Lines, and Planes

Refer to the figure.

1. Name a line that contains point D.

 \overleftrightarrow{DC} or line p

2. Name a point contained in line
- n
- .

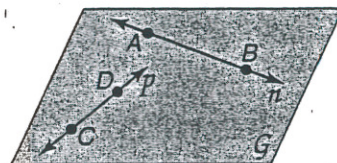
A or B

3. What is another name for line
- p
- ?

 \overleftrightarrow{CD} or \overleftrightarrow{BC}

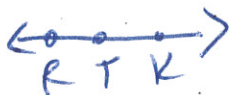
4. Name the plane containing lines
- n
- and
- p
- .

plane G or plane ADC



Draw and label a figure for each relationship.

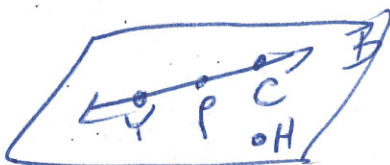
5. Point K lies on
- \overleftrightarrow{RT}
- .



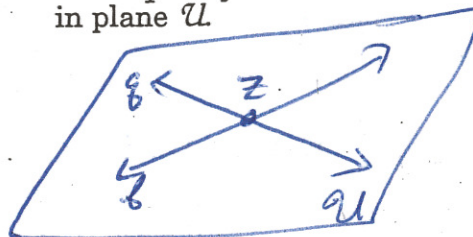
6. Plane J contains line
- s
- .



- 7.
- \overleftrightarrow{YP}
- lies in plane B and contains point C, but does not contain point H.



8. Lines
- q
- and
- f
- intersect at point Z in plane U.



Refer to the figure.

9. How many planes are shown in the figure?

5

10. How many of the planes contain points F and E?

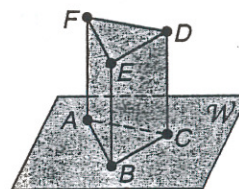
2

11. Name four points that are coplanar.

B, C, D, E

12. Are points A, B, and C coplanar? Explain.

yes, same plane



1-1

Practice

Points, Lines, and Planes

Refer to the figure.

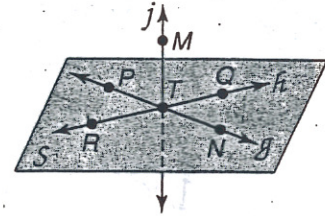
1. Name a line that contains points
- T
- and
- P
- .

 \overleftrightarrow{TP} or \overleftrightarrow{TN} line

2. Name a line that intersects the plane containing points
- Q
- ,
- N
- , and
- P
- .

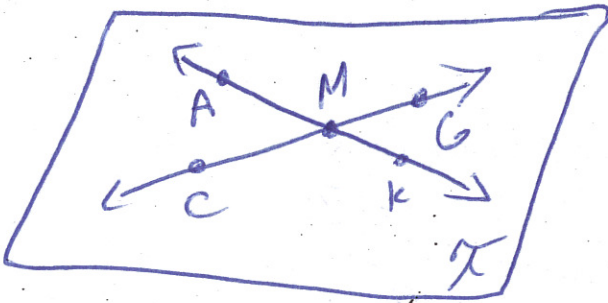
line j or \overleftrightarrow{MT}

3. Name the plane that contains
- \overline{TN}
- and
- \overline{QR}
- .

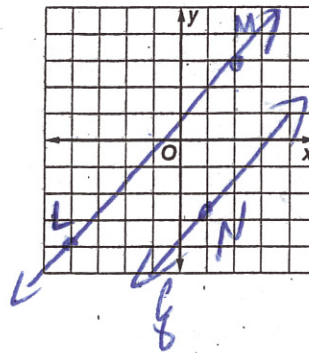
plane TNQ 

Draw and label a figure for each relationship.

- 4.
- \overline{AK}
- and
- \overline{CG}
- intersect at point
- M
- in plane
- T
- .



5. A line contains
- $L(-4, -4)$
- and
- $M(2, 3)$
- . Line
- q
- is in the same coordinate plane but does not intersect
- \overline{LM}
- . Line
- q
- contains point
- N
- .



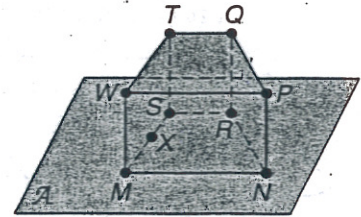
Refer to the figure.

6. How many planes are shown in the figure? 6

7. Name three collinear points.
- M, X, S

8. Are points
- N, R, S
- , and
- W
- coplanar? Explain.

No



VISUALIZATION Name the geometric term(s) modeled by each object.

9.



10. tip of pin



11.



strings

12. a car antenna

13. a library card

1

Chapter 1 Test, Form 2A (continued)

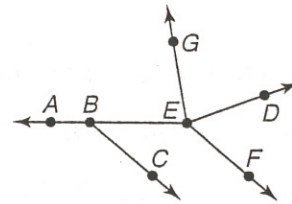
For Questions 11 and 12, use the figure at the right.

11. What type of angle is $\angle ABC$?

- A. acute angle B. right angle
 C. obtuse angle D. straight angle

12. Use a protractor to measure the angles in the figure.
 Which segment is an angle bisector?

- A. \overline{GE} B. \overline{BC} C. \overline{ED} D. \overline{EF}



11. _____

12. _____

For Questions 13–17, use the figure at the right.

13. Find $m\angle FBD$ if $\angle FBD$ and $\angle DBE$ are complementary and $m\angle FBD$ is twice $m\angle DBE$.

- A. 30 B. 45
 C. 60 D. 90

14. Which pair of angles are supplementary?

- A. $\angle ABE, \angle CBD$ B. $\angle ABC, \angle ABD$ C. $\angle ABC, \angle CBD$ D. $\angle ABC, \angle EBD$

15. Which angle is a vertical angle to $\angle ABE$?

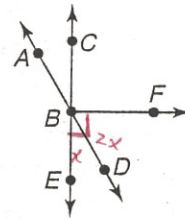
- A. $\angle DBE$ B. $\angle CBD$ C. $\angle ABC$ D. $\angle EBA$

16. If $m\angle CBF = 6x + 18$, find x so that $CB \perp BF$.

- A. 90 B. 45 C. 18 D. 12

17. Find $m\angle ABC$ if $m\angle ABC = 4x + 9$ and $m\angle EBD = 7x - 9$.

- A. 6 B. 33 C. 45 D. 73



13. _____

14. _____

15. _____

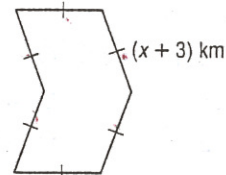
16. _____

17. _____

For Questions 18 and 19, use the figure at the right.

18. Which describes this figure?

- A. hexagon, concave, not regular
 B. pentagon, concave, regular
 C. hexagon, convex, not regular
 D. not a polygon



18. _____

19. What is x for a perimeter of 108 kilometers?

- A. 53 B. 15 C. 18 D. 105

20. A rectangle has a length of 1.4 feet and a width of 1.2 feet. What is the effect on the perimeter of this rectangle if the length and width are doubled?

- A. The perimeter is doubled. B. The perimeter is increased by 8.
 C. The perimeter is multiplied by 4. D. The perimeter is tripled.

Bonus Find $m\angle A$ if $\angle A$ is complementary to $\angle B$, $\angle B$ is supplementary to $\angle C$, $m\angle B = 15x - 2$, and $m\angle C = 25x + 22$.

B: 32°

Chapter 1 Test, Form 2A

Write the letter for the correct answer in the blank at the right of each question.

1. How many planes can be drawn through any three noncollinear points?

A. 0

B. 1

C. 2

D. 3

1. B

For Questions 2 and 3, use the figure at the right.

2. Which three points in the figure are collinear?

A. A, B, D

B. E, C, A

C. A, B, C

D. F, E, G

2. D

3. Name the intersection of the plane
- P
- and the plane that contains points B, C, and D.

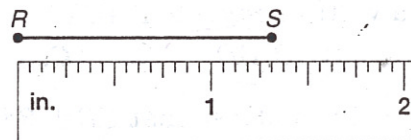
A. point B

B. \overline{BD} C. \overline{BC}

D. triangle BCD

3. _____

4. Find the length of
- \overline{RS}
- .

A. $1\frac{5}{16}$ in.B. $1\frac{3}{8}$ in.C. $1\frac{7}{16}$ in.D. $1\frac{5}{8}$ in.

4. _____

5. Find the precision for a measurement of
- $18\frac{1}{2}$
- feet.

A. $\frac{1}{2}$ ftB. $\frac{1}{4}$ ftC. $\frac{1}{8}$ ft

D. 1 in.

5. 1 in.

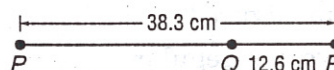
6. Find the length of
- \overline{PQ}
- .

A. 50.9 cm

B. 46.3 cm

C. 25.7 cm

D. 21.3 cm



6. _____

7. Find
- y
- if B is between A and C, AB is
- $2y$
- , BC is
- $6y$
- , and AC is 48.

A. 24

B. 8

C. 6

D. 4

7. 6

8. Find the distance between
- $P(2, 8)$
- and
- $Q(5, 3)$
- .

A. 9

B. $\sqrt{18}$ C. $\sqrt{34}$ D. $\sqrt{170}$

8. _____

9. Find the coordinates of the midpoint of
- \overline{LB}
- if
- $L(8, 5)$
- and
- $B(-6, 2)$
- .

A. $(1, 3\frac{1}{2})$ B. $(2, 1\frac{1}{2})$ C. $(7, 3\frac{1}{2})$ D. $(7, 1\frac{1}{2})$

9. _____

10. Find the coordinates of T given that S is the midpoint of
- \overline{RT}
- ,
- $R(-4, 2)$
- , and
- $S(6, 8)$
- .

A. $(-14, -4)$ B. $(16, 14)$ C. $(2, 10)$ D. $(1, 5)$

10. _____